

AMENDMENT TO THE CLAIMS

Please **AMEND** claims 1-5, 9, 15-16, 20 and 24.

Please **ADD** claim 35.

No new matter has been added. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently amended) A method for determining fluid chemistry of formation fluid in earth formation surrounding a borehole, the method comprising:

in a formation tester having a reagent container coupled to a fluids analyzer via a flow line, storing analytical reagent in the reagent container;

transporting the formation tester downhole;

drawing formation fluid into the flow-line such that the formation fluid is in communication with the fluids analyzer whereby the fluids analyzer provides downhole spectral analysis; and

while the formation tester remains downhole, mixing the analytical reagent with the formation fluid:

moving a reacted mixture of formation fluid and analytical reagent fluid through a spectral analyzer cell in the fluids analyzer; and

performing spectral analysis on the reacted mixture to determine fluid chemistry while downhole.

2. (Currently amended) A method according to claim 1, ~~including the further step of~~ wherein the step of mixing the analytical reagent with the formation fluid includes injecting analytical reagent into formation fluid within the flow-line to create a the mixture of formation fluid and analytical reagent in the flow-line whereby the fluid chemistry of formation fluid is determined in the earth formation.
3. (Currently amended) A method according to claim 2, wherein injecting analytical reagent includes injecting analytical reagent using a syringe pump.
4. (Currently amended) A method according to claim 2 1, further comprising the spectral analysis being an optical spectral analysis, ~~establishing and storing and measuring~~ baseline optical density values of the formation fluid for at least one wavelength prior to ~~injecting~~ mixing the analytical reagent, then with a storing means storing the baseline optical density values.
5. (Currently amended) A method according to claim 2, wherein injecting analytical reagent includes injecting a predetermined volume of analytical reagent.
6. (Original) A method according to claim 5, further including adjusting the predetermined volume.
7. (Original) A method according to claim 6, wherein adjusting the predetermined volume includes adjusting an injection period of time.

8. (Withdrawn) A method according to claim 6, wherein adjusting the predetermined volume includes adjusting an injection pump rate.
9. (Currently amended) A method according to claim 5, wherein injecting analytical reagent includes injecting analytical reagent into a stopped formation fluid.
10. (Withdrawn) A method according to claim 5, wherein injecting reagent includes injecting reagent into a flowing formation fluid.
11. (Withdrawn) A method according to claim 2, wherein injecting reagent includes injecting reagent using wellbore overpressure.
12. (Withdrawn) A method according to claim 11, wherein injecting reagent includes injecting reagent at a controlled rate using a restrictor.
13. (Withdrawn) A method according to claim 11, wherein injecting reagent includes injecting reagent at a controlled rate using a throttle valve.
14. (Withdrawn) A method according to claim 11, wherein injecting reagent includes injecting reagent for a controlled period of time.

15. (Currently amended) A method according to claim 2 1, wherein ~~injecting reagent includes extracting formation fluid from a stopped flow-line~~ an extractor pump extracts formation fluid from a stopped flowline so as to induce analytical reagent injection into the flowline.
16. (Currently amended) A method according to claim 15, wherein injecting analytical reagent includes injecting a predetermined volume of analytical reagent.
17. (Original) A method according to claim 16, further including adjusting the predetermined volume.
18. (Withdrawn) A method according to claim 17, wherein adjusting the predetermined volume includes setting an extraction pump rate.
19. (Original) A method according to claim 17, wherein adjusting the predetermined volume includes setting an extraction time.
20. (Currently amended) A method according to claim 15, wherein the extractor pump is extracting formation fluid ~~includes using~~ a syringe piston.
21. (Withdrawn) A method according to claim 15, wherein extracting formation fluid includes using a flow-line pump.

22. (Withdrawn) A method according to claim 15, wherein extracting formation fluid includes using a step piston.

23. (Withdrawn) A method according to claim 22, wherein extracting formation fluid includes adjusting metering valve settings.

24. (Currently Amended) A method according to claim 1, wherein storing analytical reagent includes storing different reagents in first and auxiliary reagent containers.

25. (Withdrawn) A fluids analyzer for analyzing formation fluid in earth formation surrounding a borehole, comprising:

a probe for receiving downhole formation fluid from earth formation.

a flow-line coupled to receive formation fluid downhole from said probe;

a reagent container in fluid communication with said flow-line;

spectral analyzer means, coupled to receive a mixture of formation fluid and reagent from said flow-line downhole, for analyzing said mixture to produce time-series spectral; and

computing means for determining a characteristic of formation fluid from said spectral data.

26. (Withdrawn) A fluids analyzer according to claim 25, wherein said reagent container is a syringe pump.
27. (Withdrawn) A fluids analyzer according to claim 25, wherein reagent in said reagent container is exposed to wellbore pressure.
28. (Withdrawn) A fluids analyzer according to claim 27, further comprising a syringe pump fluid container coupled to extract fluid from said flow-line.
29. (Withdrawn) A fluids analyzer according to claim 27, wherein said reagent container is coupled to said flow-line by a restrictor.
30. (Withdrawn) A fluids analyzer according to claim 27, wherein said reagent container is coupled to said flow-line by a throttle valve.
31. (Withdrawn) A fluids analyzer according to claim 27, further comprising a step piston coupled to extract fluid from said flow-line.
32. (Withdrawn) A fluids analyzer according to claim 31, further comprising a metering valve between said step piston and said flow-line.

33. (Withdrawn) A fluids analyzer according to claim 25, further comprising an auxiliary reagent container in communication with said flow-line independently of a first reagent container.

34. (Cancelled)

35. (New) A method according to claim 1, including the further step of determining one or more types of formation fluid with the fluids analyzer such that the result of the determined formation fluid indicates if the stored analytical reagent is to be used, whereby utilizing the stored analytical reagent.